DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028709
Date Inspected: 05-Nov-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name:	Bernie Docena and Steve Jensen			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 5E-PP29.5-E5 deck access hole outside, QA randomly observed ABF/JV qualified welder Lou Xiao Hua continuing to perform CJP groove welding repair on a Non-Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded splice butt joint. The welder was noted using propylene gas torch to preheat the repair area and its vicinity to 150°F and as soon as the required temperature was attained the welder started performing the welding repair. Welder Lou Xiao Hua was observed manually welding in 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1000 Repair. Welder Lou Xiao Hua was noted welding at various Y locations. During welding, ABF QC Steve Jensen was noted monitoring the welder's welding parameter with measured working current of 128 amperes on the 3.2mm diameter E7018H4R electrodes. At the end of the shift, repair welding at the location mentioned above was completed.

Y-location Length Width Depth RWR# Remarks

1. 1065mm 100mm 30mm 12mm N/A R2- completed.

At Tower elevation 143 meter, this QA randomly observed ABF/JV qualified welder Richard Garcia continuing to perform 1G(flat) position Partial Joint Penetration (PJP) welding 6mm bent plate butt joint per Request for Information ABF-RFI-002642R01 dated December 6, 2011. The RFI pertains to the modification of the Tower Lift 4 Façade Seal Elevator interference. The welder was noted implementing the Option #3 and detail #3 of the RFI's attachment.

During welding, the welder was observed manually welding in 1G (flat) position utilizing self-shielded Flux Cored Arc Welding (FCAW-S) with 0.035" diameter E71T-11 wire electrode implementing Caltrans welding procedure ABF-WPS-D11-2044. ABF QC Andrew Keech was noted on site monitoring the welder and his welding parameters with measured working current of 80 amperes and 16 volts. During the shift, two bent plates modification were done at north and west shafts of the Tower at elevation 143 meter.

At W2 Hinge K Pipe Beam, together with ABF QC Bernie Docena, this QA performed Magnetic Particle Testing (MT) on the removal of the lifting lugs. This joint inspection was requested by ABF Lead QC Bonifacio Daquinag through e-mail request from ABF Field Engineer Daniel Mc Nichol. During the test, it was noted that all eight (8) lifting lugs removal (four from the East bound and four from the West bound) appeared to have linear indications. The results were relayed by ABF QC Bernie to his Lead QC Bonifacio Daquinag while this QA has relayed the results to Lead QA Rodney Patterson. ABF personnel at site were also informed about the existence of linear indications on the lifting lug removal.

FW Spenser:

The QAI observe the ongoing installation, field fit-up and tack welding of the utility pipe support lug 5" long x 1" wide x 3/8" thick along the W5 grid line (panel point PP20 to PP21). The lug pipe support was fillet welded on both sides of the 2 ½" diameter domestic water line and 4" diameter compressed air line. The QC inspection was performed by Steve Jensen utilizing the Welding Procedure Specification (WPS) identified as Fillet Murex to monitor the tack welding and fillet welding to verify the welding parameters. The welding parameters were observed and recorded as 90 amps utilizing 2.4 mm electrodes with the welding performed in the 2F position. The tack welding/fillet welding was performed and completed by FW Spencer welder Damian Llanos.

After the completion of the fillet welding on lug supports, the same welder started fit up and tack welding the tie-in joints of 4" diameter at joint location 10.8/4/20.5/SW and 10.4/4/20.0/SW. The welder performed and completed the fit up and tack welding until the end of the welder's shift.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Reyes,Danny	QA Reviewer